

**Supplemental Table 1.** Primers used for cloning of recombinant proteins. Cutting sites of restriction enzymes are underscored.

fusion protein	primer designation	primer sequence
OspC	BaPKO_ospC_F	5'-GGTGGT <u>GGATCC</u> ATAATTCAAGGGAAAGGTGGG-3'
	BAPKO_ospC_R	5'-GGTGGT <u>CTCGAG</u> TGACTTTATTTCCAGTTACTT-3'
human tryptase 1 (TPSAB1)	TPSAB1_fwd	5'-GATGAT <u>CTCGAG</u> CTGAATCTGCTGCTGG-3'
	TPSAB1_rev	5'-GATGAT <u>GAATTCTTACGGCTTTGGGACATAGT</u> -3'
human tryptase 1_ΔPKKP	TPSAB1_ΔPKKP_fwd	5'-TAAGAATT <u>CGAACGTTGATCC</u> -3'
	TPSAB1_ΔPKKP_rev	5'-GACATAG <u>TGGTGGATCCAG</u> -3'
<i>P. aeruginosa</i> Mg-chelatase ( <i>bchI</i> )	P_aeruginosa_mg_seq_fwd	5'-GAACATT <u>CGCCCTGCTGCAT</u> -3'
	P_aeruginosa_mg_seq_rev	5'-ATCCGCACCCAT <u>GACCG</u> -3'
	Mg-Chelatase_fwd	5'-TAATA <u>ACTCGAGAGCGCTACCGTGCATTAC</u> -3'
<i>P. aeruginosa</i> Mg-chelataseΔPKKP ( <i>bchI</i> )	MgCh_ΔPKKP_fwd	5' TAAGAATT <u>CGAACGTTGATCCGCTGCTAACAAAGC</u> -3'
	MgCh_ΔPKKP_rev	5'-CCAGCGCGGCAG <u>CTCGCG</u> -3'

**Supplemental Table 2.** OspC variants 0, and A-M created from the full-length protein. For variant 0 the amplicon was cloned into vector pRSET-C (Thermo Fisher Scientific, Austria). The cutting sites of the restriction enzymes used are underscored. Other variants were generated by site directed mutagenesis (sdm) using the primers listed. For variants A-G and L-M, vector pRSET-C-bapko-ospC was used as a PCR template for sdm and reverse primer 5'-ACTTGTAAGTTCTTAACTGAATTAG-3' was used together with the listed primer sequences. For variant H forward and reverse primers are listed and pRSET-C-bapko-ospC was used as a PCR template. For variant I forward and reverse primers are listed and variant A was used as a template for amplification. For variants J-K forward primer 5'-TAATTAGATCAATATTATAAGATTAATTG-3' was used together with the listed reverse primers and pRSET-C-bapko-ospC was used as a template for sdm PCR.

OspC variant	primer sequence(s)
0	5'-GGTGGT <u>GG</u> GATCCATAATT <u>CAGGGAAAGGTGGG</u> -3' (BaPKO_ospC_F) 5'-GGTGGT <u>CTC</u> GAGGTG <u>T</u> ACTT <u>GAGCTG</u> CTTTA-3' (BAPKO_ospC_REV_deltaC)
A	5'-TAATTAGATCAATATTATAAGATTAATTG-3'
B	5'-CCAAAAAAACCTTAATTAGATC-3'
C	5'-AGTCCAAAAAAACCTTAATTAG-3'
D	5'-GAAAGTCCAAAAAAACCTTAATTAG-3'
E	5'-GCAGAAAGTCCAAAAAAAC-3'
F	5'-GTA <u>GCAGAAAGTCCAAAAAAAC</u> -3'
G	5'-GTTG <u>TAGCAGAAAGTCCAAAAAAAC</u> -3'
H	5'-TAATTAGATCAATATTATAAGATTAATTG-3' 5'-ACTT <u>CTGCTACAACAGG</u> TTCAA <u>TTTC</u> CAATT <u>TACTCA</u> ATT <u>TTTC</u> -3'
I	5'-AGTCCAAAAAAAC <u>CTGA</u> TTAA <u>AGACAGAA</u> ATT <u>GCAAAG</u> -3' 5'-TT <u>CTGCTACAACAGG</u> TTCAA <u>TTTC</u> CAATT <u>TACTCA</u> ATT <u>TTTC</u> -3'
J	5'-TTTT <u>GGACTTCTGCTAC</u> -3'
K	5'-TTT <u>GGACTTCTGCTAC</u> -3'
L	5'-AAAAACCTTAATTAGATCAATATTATAAG-3'
M	5'-AAACCTTAATTAGATCAATATTATAAG-3'